

APPENDIX C

Forest Wide Standards Which Apply to the Robert's Gap Project

The following Forest / Management Area Design Criteria are taken directly from the RLRMP while the list below is not all inclusive all the designs below do directly apply to the Three Knob Project;

FW01 Water control structures necessary for the control of surface water movement from soil-disturbing activities will be constructed for temporary use roads, skid trails, and fire lines concurrent with construction operations.

FW02 Maximum even-aged or two-aged regeneration stand size will be limited to 80 acres for pine and 40 acres for hardwood. These acreage limits do not apply to areas treated as a result of natural catastrophic conditions such as fire, insect or disease attack, or windstorm. Areas managed as permanent openings (e.g., meadows, pastures, food plots, rights-of-way, and savannas) are not subject to these standards and are not included in calculations of opening size, even when within or adjacent to created openings.

FW03 Openings created by even-aged and two-aged regeneration treatments will be separated from each other by fully stocked stands of at least 10 acres in size with a minimum of 330 feet in width.

FW04 Regeneration areas will be distributed so that no more than 30 percent of 1,000 acres is in the 0 to 20 year age class.

FW18 Mature forest cover is maintained within 100 feet slope distance from the top of bluffs and 200 feet slope distance from the base to provide wildlife habitat associated with the unique landform. Within this zone, activities are limited to those needed to ensure public safety or to maintain and improve habitat for federally listed species or other species whose viability is at risk.

FW20 Herbicides and application methods are chosen to minimize risk to human and wildlife health and the environment. Diesel oil will not be used as a carrier for herbicides, except as it may be a component of a formulated product when purchased from the manufacturer. Vegetable oils will be used as a carrier for herbicides when available and compatible with the application proposed.

FW21 Herbicides are applied at the lowest rate effective in meeting project objectives and according to guidelines for protecting human and wildlife health. Application rate and work time must not exceed levels that pose an unacceptable level of risk to human or wildlife health. If the rate or exposure time being evaluated causes the Margin of Safety or the Hazard Quotient computed for a proposed treatment to fail to achieve the current Forest Service Region 8 standard for acceptability (acceptability requires a MOS > 100 or, using the SERA Risk Assessments found on the Forest Service website, a HQ of < 1.0), additional risk management must be undertaken to reduce unacceptable risks to acceptable levels or an alternative method of treatment must be used.

FW22 Fuelwood sales will not be made for a minimum of 30 days after treatment in areas where pesticide treatments have been made. Should injection of trees be done, effected trees will not be sold as fuelwood.

FW23 Weather is monitored and the project is suspended if temperature, humidity, and/or wind do not meet the criteria shown in Table 3-2.

Table 3-2: Criteria for suspension of Herbicide Application.

Application Techniques	Temperatures Higher Than	Humidity Less Than	Wind (at Target) Greater Than
Ground			
Hand (cut surface)	NA	NA	NA
Hand (other)	98°	20%	15 mph
Mechanical (liquid)	95°	30%	10 mph
Mechanical (granular)	NA	NA	10 mph

FW25 A certified pesticide applicator supervises each Forest Service application crew and trains crew members in personal safety, proper handling in application of herbicides, and proper disposal of empty containers.

FW26 With the exception of treatment by permittees of right-of-way corridors that are continuous into or out of private lands and through Forest Service managed areas, no herbicide is broadcast within 100 feet of private land or 300 feet of a private residence unless the landowner agrees to closer treatment. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

FW27 No soil-active herbicide is ground applied within 30 feet of the drip line of non-target vegetation specifically designated for retention (e.g., den trees, hardwood inclusions, adjacent untreated stands) within or next to the treated area. However, chemical side pruning is allowed in this buffer if necessary, but movement of herbicide to the root systems of non-target plants must be avoided. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

FW28 No herbicide is ground broadcast within 60 feet of any known threatened, endangered, proposed, or sensitive species except for endangered bats. Selective applications may be done closer than 60 feet, but only when supported by a site-specific analysis. Selective herbicide treatments using a non-soil active herbicide may be used closer than 60 feet to protect TES plants from encroachment by invasive plants.

FW29 Application equipment, empty herbicide containers, clothes worn during treatment, and skin are not cleaned in open water or wells. Mixing and cleaning water must come from a public water supply and be transported in separate labeled containers.

FW30 Herbicide mixing, loading, or cleaning areas in the field are not located within 300 feet of private lands, open water or wells, or other sensitive areas.

FW32 Herbicide will not be used within the appropriate SMZs or within 300 feet of any public or domestic water intake. Selective treatments may occur within SMZs only when a site-specific analysis of actions to prevent significant environmental damage such as noxious weed infestations supports a "Finding of No Significant Impact" (FONSI), and then using only herbicides labeled for both terrestrial and aquatic use within these areas.

FW33 – Maintain the following average standing dead, existing, and potential hollow den and loose bark trees per acre forest wide:

- 6 snags per acre 2 of which are greater than 12” dbh
- 9 snags per acre in primary and secondary Indiana bat zones

Unless necessary for insect/disease control or to provide for public safety, standing dead and den trees will not be cut during salvage operations.

Snags will be left from the largest size classes and maybe clumped.

FW35 Provide up to four permanent water sources per square mile in upland sites.

FW37 Wildlife water holes (ponds) less than one-half surface acre will be managed for native amphibian habitat and not stocked with fish.

FW39 Add large woody debris (LWD) to streams and rivers where natural levels are inadequate, except in wilderness areas.

FW42 Karst features will be recognized and documented when they are found to occur across the landscape; these features include caves, springs, sinkholes, and losing streams.

FW44 Management activities within KMZs will be planned to use practices that result in minimal surface disturbance; this will be measured as less than five percent soil disturbance over the entire KMZ within the project area.

FW48 - Optimal over-story density within the secondary zone around Indiana bat hibernacula is a range of 50 to 70 percent canopy closure. Use timber harvest, non-commercial thinning, and prescribed fire as needed to regulate and maintain this optimal density.

During normal order of entry for compartments within Indiana bat secondary conservation zones, do landscape scale analysis of existing forest stand conditions. This analysis should be used to determine commercial and non-commercial treatments needed to shift percent canopy closure toward the optimal over-story density. The long-term goal of treatments is to adjust canopy closure so that 80 to 90 percent of the primary conservation zone is within the 50 to 70 percent canopy closure range. This will not be fully accomplished during this planning period. Annually report canopy cover adjustments accomplished with commercial and non-commercial treatments within Indiana bat conservation zones to the Arkansas Field Office, USFWS.

When designating trees to be cut to regulate over-story density, two approaches are

recommended for equating canopy density to target leave basal area. A simple rule of thumb is to use site index minus 10 as the target basal area. Another option is the use of canopy density/basal area conversion charts defined by tree diameter classes.

FW50 A 1,500-ft radius protection zone will be established around any bald eagle nest or communal roost site found on the Forests. Within this protection zone, vegetation management that would affect the forest canopy, or other activities that may disturb eagles, will be prohibited during periods of eagle use.

FW51 Prescribed burn plans will identify, as smoke sensitive targets, area where active eagle nests with eggs or chicks are present. Mitigation will be done to avoid putting heavy accumulations of smoke into those areas. Prescribed burns should not be planned closer than 1500 feet from active nest sites during nesting season.

FW55 Close or restrict access to caves where disturbance or vandalism of critical resources may occur.

FW66 – Tree cutting, and prescribed fires are prohibited in primary and secondary Indiana bat zones between May 1 and November 30. Adjustments to these dates may be made on a project-specific basis through coordination with the Arkansas Field Office, USFWS. Site-specific inventories are good for two calendar years for the date of survey completion.

FW67 – Tree cutting, and salvage operations can occur between December 1 and March 15 without a site-specific inventory. Additional coordination with the USFWS is not required.

FW68 – In the secondary zone buffer around the Indiana bat hibernacula, a minimum of 60 percent of all forested acreage is maintained in 9-inch or greater size classes. Of this total, about 40 percent will be trees in a mature condition. The 0-10 age class does not exceed 10 percent of forested acreage of the secondary buffer at any time.

FW69 – In the secondary zone buffer around Indiana bat hibernacula, live trees or snags, buildings, and other structures known to have been used as roosts by Indiana bats are protected from cutting and/or modification until they are no longer suitable as roost trees, unless their cutting or modification is needed to protect public or employee safety. Where roost tree cutting or modification is deemed necessary, it occurs only after consultation with the USFWS.

FW70 Shagbark hickory, because of its high value as roost/maternity sites, should receive special attention during sale layout and cultural treatments. In areas where shagbark hickory is uncommon, retain all shagbark hickory over six inches dbh (6" dbh) except those that are immediate hazards. If multiple 6-inch or greater stems are encountered, which are competing for moisture, nutrients, and growing space, thin to retain the largest shagbark trees with potential for crown development and longevity. Where shagbark hickory is common within the treatment stand and the surrounding landscape, retain the largest individual shagbark stems in the treatment stand as part of the 20 basal area (overstory) and allow smaller stems, which might be in excess of six inches dbh (6" dbh) to be removed during regeneration treatments.

FW71 A 200-foot buffer of undisturbed forest will be maintained around gray bat maternity and hibernation colony sites, Ozark big-eared bat maternity sites, bachelor sites, or winter colony sites. Prohibited activities within this buffer include cutting of overstory vegetation; construction of roads, trails, or wildlife openings or development of pastures; and prescribed burning. Exceptions may be made where coordination with USFWS determines these activities to be compatible with recovery of these species.

FW72 Promote and implement current Best Management Practices (BMPs) for forestry as recommended by the Arkansas Forestry Commission to all management activities in order to control non-point source pollution and comply with state water quality standards.

FW73 Concurrent with temporary road construction, install silt barriers at the base of the cut and fill slopes within 50 feet of a stream course.

FW74 At stream crossings, seed and mulch cut and fill slopes within 50 feet slope distance within 5 days after construction of temporary roads.

FW75 Apply gravel at temporary road crossings for 35 feet on both sides of the stream channel, when the risk of soil erosion is present and where the crossing substrate requires hardening.

FW76 On temporary roads, apply gravel on steep grades exceeding 10 percent slope.

FW77 Reestablish native cane species along streams and rivers during native grass restoration activities

FW78 Soil disturbances within SMZs will be treated with erosion control measures within five days.

FW79 Use only native or non-persistent nonnative species when seeding temporary openings from soil disturbing activities.

FW80 No mechanical site preparation (excluding mulching) is done on sustained slopes over 35 percent or on slopes over 20 percent when soil erosion hazard is classified as "severe."

FW81 Streamside management zones (SMZs) will be identified and designated during the appropriate stages of project planning for all defined channels, perennial streams, and springs. Minimum SMZs will be as described in

Table 3-3 based on the percent of the adjacent slope:

Table 3-3: Minimum Streamside Management Zones.

Stream Type	Slope Adjacent to the Channel		
	0-15%	16-35%	36%+
Description	Horizontal Distance from Both Sides of Stream Bank or Lake/Pond		
Perennial & Springs	100'	125'	150'
Defined Channels	50'	75'	100'

- ▶ Vegetation within 20 feet of the bank of a perennial stream and 5 feet of a defined channel will not be removed.
- ▶ Retain at least 50 square feet per acre of basal area within the SMZs when available.
- ▶ No mechanical site preparation is allowed within the SMZs.
- ▶ Within SMZs, only non-motorized trails are allowed. Motorized trails are prohibited except at designated crossings or where the trail location requires some encroachment for safety.
- ▶ No more than five percent of the mineral soil within the SMZs will be exposed during ground disturbing activities.
- ▶ Exceptions to SMZ standards are only allowed after site-specific determinations and with consultation/approval by the appropriate Staff Officer.

FW82 To limit soil compaction, no mechanical equipment is used on plastic soils when the water table is within 12 inches of the surface or when soil moisture exceeds the plastic limit. Soil moisture exceeds the plastic limit if the soil can be rolled to pencil size without breaking or crumbling.

FW85 On all soils dedicated to growing vegetation, the organic layers, topsoil, and root mat will be left intact over at least 85 percent of an activity area.

FW87 Within the SMZs, cross only at designated crossings identified during planned activities. Cross at a 90-degree angle and utilize temporary structures to maintain bank stability.

FW88 When temporary culverts or other approved structures are used, they must be removed upon completion of the activity. Streamside management zones disturbances will be restored to a stable, natural condition.

FW89 Design, locate, and construct new system roads or other improvements to avoid floodplains and riparian areas in order to minimize impacts on water quality, flood flows, and riparian habitat.

FW90 Soil and debris will not be deposited in wetlands, springs, or seeps.

FW91 Any area that meets the riparian area definition (Page 2-71) will be managed as Riparian Corridors MA (3.I). These stands will be mapped and reallocated to Riparian Corridors MA (3.I) in subsequent LRMP amendments.

FW92 Best available smoke management practices (FSM 5140, State Smoke Management Plans and State Implementation Plans) will be used to minimize the adverse effects of prescribed burning on public health and safety and to protect visibility in Class I Area (Upper Buffalo Wilderness).

FW93 Prescribed burning will be conducted in, or adjacent to, counties with forecasted high Air Quality Index (AQI) values (AQI equals orange or higher) only if meteorological conditions indicate that smoke will be carried away from the high AQI area.

FW94 Conduct all National Forest management activities in a manner that does not result in (1) a significant contribution to a violation of National Ambient Air Quality Standards or (2) a violation of applicable provisions in the State Implementation Plan.

FW101 All dispersed and developed recreation management activities will be managed according to Recreation Opportunity Spectrum (ROS) classifications found in Appendix G of RLRMP.

FW102 Rehabilitate, relocate, or close sites or trails when vegetation loss or excessive soil compaction occurs to prevent sedimentation and loss of water quality.

FW103 All areas of the Ozark-St. Francis National Forests except designated open roads and trails are closed to OHV use in order to minimize disturbance, environmental damage, and other user conflicts.

FW104 Vegetation along trails is treated to maintenance levels identified in the publication "Trails South." Priority is given to correcting unsafe conditions, preventing resource damage, and providing for intended recreation experience level.

FW105 Projects will be designed to meet the assigned scenic integrity objectives (SIO) as defined in Appendix D of the Three Knob EA.

FW106 Resource management activities will be conducted in a manner that promotes SIO. Exceptions for short periods of time (one growing season or less) may be allowed to achieve important resource management goals on a case-by-case basis under consultation with and approval of the Forest Landscape Architect or the Forest Supervisor.

FW108 Where possible, locate log decks and borrow areas out of sight of roads and trails in areas that have high or very high SIOs.

FW109 In the foreground of scenic roads and trails, prescribed burns will meet SIO criteria. (See Treatment Guide)

FW110 In very high or high SIO areas, a landscape architect will be involved in the site selection process and development of plans and specifications for projects. In medium SIO areas, project planning will be coordinated with a landscape architect. In low SIO areas, as long as the objective for the area is met, projects may proceed without the involvement of a landscape architect

FW111 Whenever proposed projects may affect a recreation trail, consult with the Forest landscape architect (or his/her designated representative) to determine how best to minimize impacts on the trail, minimize future vegetation encroachment on the trail and meet the assigned Scenic Integrity Objective. Retain sufficient overstory vegetation above and immediately adjacent to the trail to reduce opportunities for blackberry vines and other vegetation that impede non-motorized travel to flourish.

FW112 Timber harvests located near recreation trails will be conducted with mitigation measures appropriate for the trail Concern Level and the Scenic Integrity Objective of the area. Where skid trails or skidders must cross the recreation trail, the number of crossings should be minimized and crossings should be made at right angles unless doing so would result in greater damage to the trail than crossing at another angle. The affected trail tread will be restored when the timber harvest is completed.

FW113 Whenever proposed projects may affect a recreation trail, consult with the Forest landscape architect (or his/her designated representative) to determine how best to minimize impacts on the trail, minimize future vegetation encroachment on the trail and meet the assigned Scenic Integrity Objective. Retain sufficient overstory vegetation above and immediately adjacent to the trail to reduce opportunities for blackberry vines and other vegetation that impede non-motorized travel to flourish.

FW114 Close access to caves where there are sites listed on the National Register of Historic Places.

FW115 Coordinate management direction with the State Historic Preservation Office, federally recognized tribes, and other appropriate state and federal agencies pursuant to Programmatic Agreement.

FW117 Fuels treatment is allowed through prescribed burning or mechanized means while meeting well-defined risk mitigation objectives.

FW118 Close or obliterate all temporary roads.

FW119 Temporary roads should have a grade which does not exceed 20 percent for lengths more than 200 feet.

FW120 Erosion control will be applied to all newly disturbed road cut and fill embankments before closing roads with native-bed surfaces that exceed a 10 percent grade.

FW121 All recreation trails, system roads, and associated improvements in project areas will be kept free of logs, slash, and debris. Any road, trail, ditch, or other improvement damaged by operations will be promptly repaired.

FW129 Locate, design, and maintain trails, roads, other facilities, and management activities to avoid, minimize, or mitigate potential geologic hazards.

FW150 All prescribed burning will be fully coordinated with all resources and documented in Silvicultural Prescriptions signed by a certified Silviculturist and approved by the District Ranger.

FW151 Do not burn through planted plantations less than three years old.

FW152 Except when firefighter safety and/or life and human property are compromised, fire line construction within 20 feet of a perennial stream and five feet of a defined channel will be done using hand tools.

FW153 Herbicide treatment areas will not be prescribed burned for at least 30 days after application.

FW155 In any prescribed burning, the duff layer will remain present on 80 percent of the burn area.

FW156 Appropriate erosion control strategies will be applied to fire lines in order to minimize soil erosion.

FW160 If necessary to cross a stream with a fire line, the crossing will be as close to right angles as possible and be stabilized as soon after the fire is controlled as possible.

FW161 The full range of wildland suppression tactics (from immediate suppression to monitoring) may be used consistent with Forest and resource management objectives and direction.

MA1.C-1 Any project proposals which could affect a Wild and Scenic River will be evaluated against the appropriate river's management plan to ensure that the proposal does not conflict with characteristics or classification that qualified the river for inclusion in the Wild and Scenic River System.

MA1.C-2 No management activities will be proposed that may compromise the outstandingly remarkable value(s), potential classification, or free-flowing character until designated or released from consideration.

MA1.C-25 Prescribed fire is allowed to reduce a buildup of fuels to an acceptable level and to decrease the risks and consequences of wildland fire escaping from the wild river corridor.

Other Forest Directive Documents

All Herbicide use proposed in this EA will follow the implementation plan developed in conjunction with the NNIPS Project 2019 and adopted as Forest Direction.